

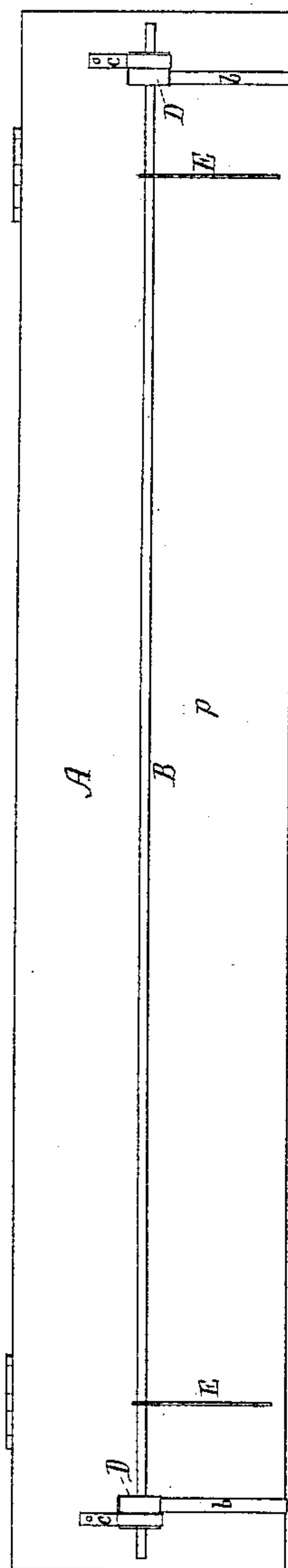
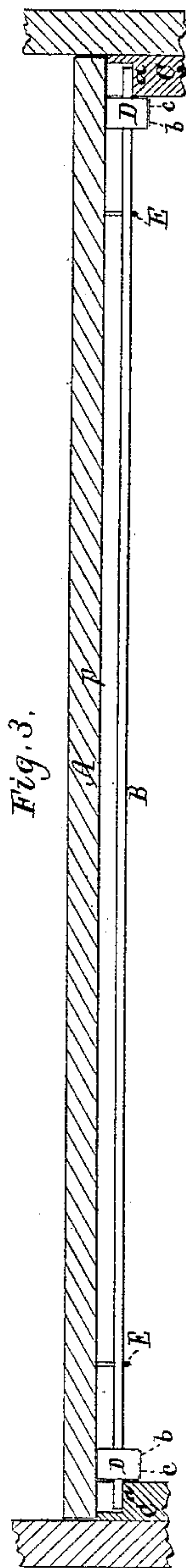
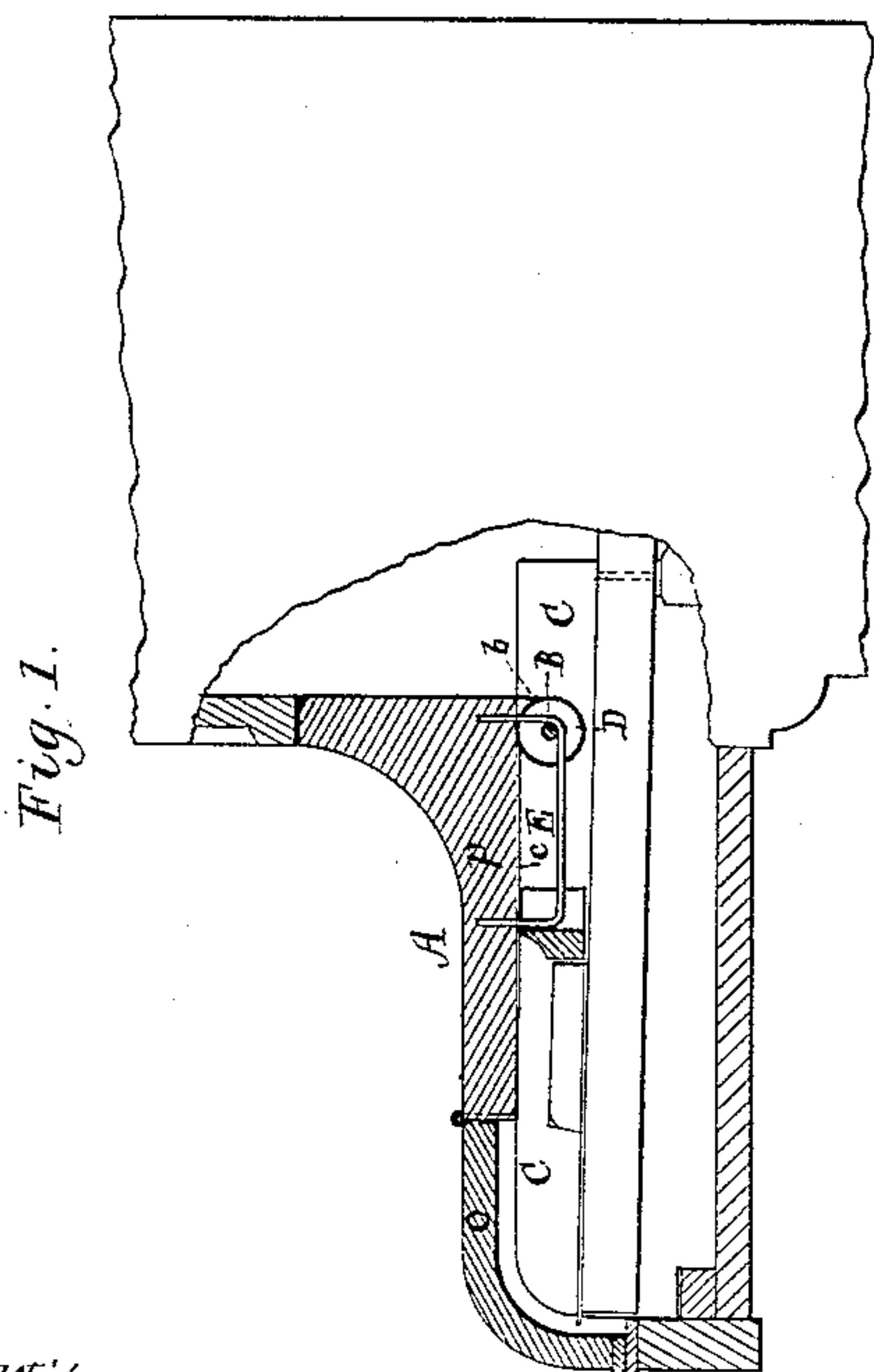
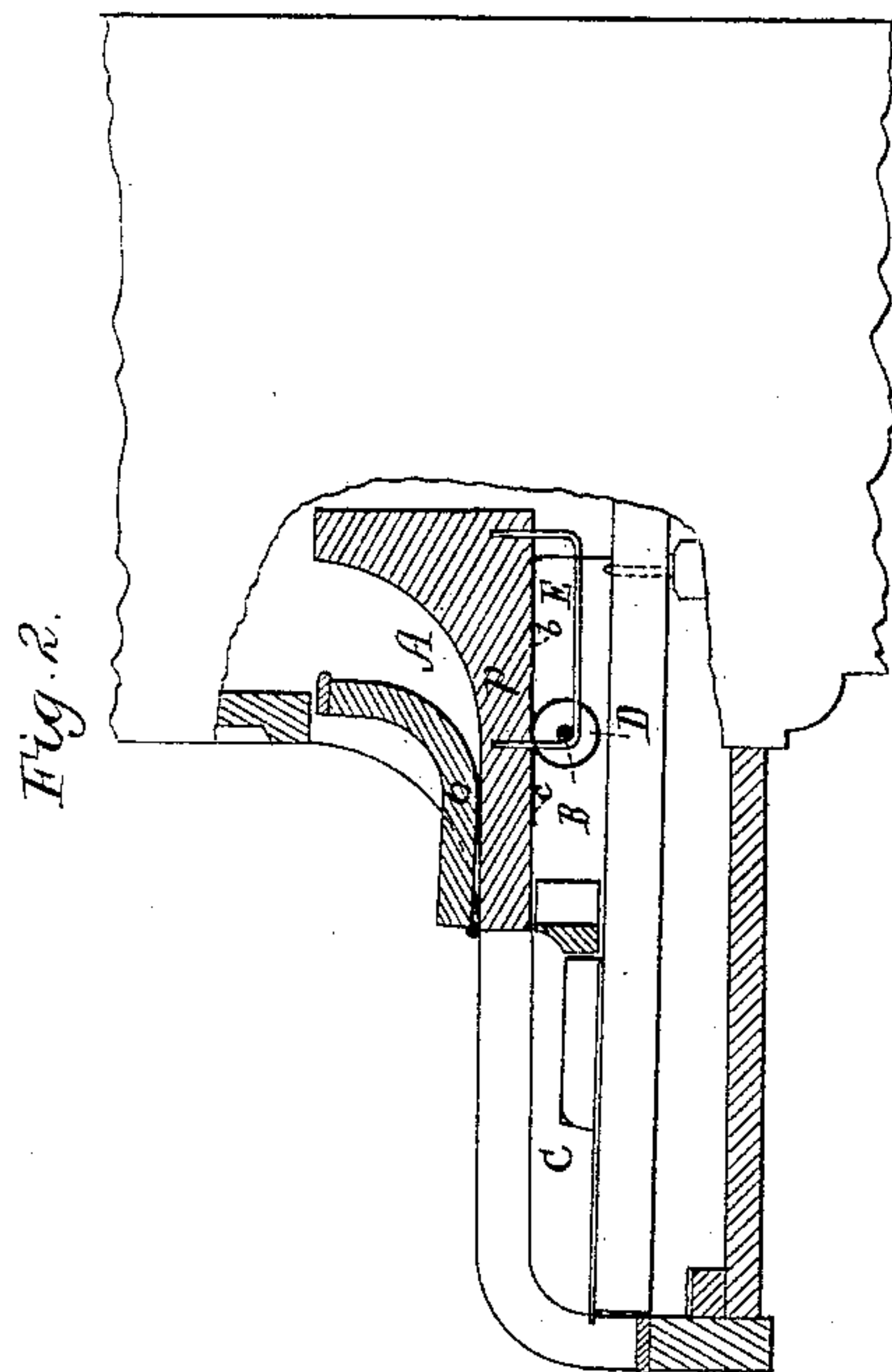
(No Model.)

A. F. DELANO.

PIANO CASE.

No. 385,172.

Patented June 26, 1888.



Witnesses.

A. F. Piper.
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Inventor.

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UNITED STATES PATENT OFFICE.

ALPHONSO F. DELANO, OF HYDE PARK, ASSIGNOR TO THE SMITH AMERICAN ORGAN AND PIANO COMPANY, OF BOSTON, MASSACHUSETTS.

PIANO-CASE.

SPECIFICATION forming part of Letters Patent No. 385,172, dated June 26, 1888.

Application filed February 23, 1888. Serial No. 264,918. (No model.)

To all whom it may concern:

Be it known that I, ALPHONSO F. DELANO, a citizen of the United States, residing at Hyde Park, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Piano-Fortes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-

10 pertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification. Figure 1 is a sectional elevation of a portion 15 of an upright piano-forte with my improvement applied thereto, it showing the keys as covered by the lid. Fig. 2 is a similar view showing the keys uncovered and the lid run back. Fig. 3 is a longitudinal section of my 20 improvement and the parts of the piano-case to which it is applied. Fig. 4 is an under side view of the lid, showing the arrangement with it of the shaft and its bands and the stops or hangers.

25 My invention relates to mechanism for operating the lid or fall-board of a piano or an organ in such manner that it cannot bind against the parts of the case between which it is arranged, but will always admit of free and 30 easy movement of the lid when desired to cover or uncover the keys of the instrument.

In carrying out my invention I arrange underneath the lid A, which is made in two parts, 35 *o p*, hinged together, as shown, a shaft, B, the ends of which are arranged in bearings *a* in the rails or projections C from the ends of the case, and on which the ends of the lid rest. The said shaft is provided near each end of it with a pulley, D, secured near their ends, to 40 the periphery of each of which and to the lid are bands *b c*, which wind on said pulleys in opposite directions—viz., when the lid is forward, so as to cover the keys, the bands *c* will be nearly unwound from the pulleys and the bands 45 *b* will be wound thereupon, so as to envelop the periphery thereof, and, on the contrary, when the lid is run back to uncover the keys the bands *b* will be unwound and the bands *c*

wound on the periphery of the pulleys. The surface of the pulleys D extend sufficiently 50 above the upper surface of the rails C to receive the weight of the lid or a portion thereof, which will lessen the friction of the said lid on the rails.

Extending down from the part *p* of the lid 55 are two hangers, E, which serve to keep the shaft in connection with the lid while it is being removed from the case, as occasion may require, and the ends or vertical portions of said hangers also serve as stops, by bringing 60 up against the shaft, to limit the movement of the lid in either an inward or outward direction, as seen in Figs. 1 and 2.

By the mechanism hereinbefore described the lid can be moved by the hand of a person 65 as readily when applied to either end of it as to any other portion of it, as, owing to the arrangement of the shaft and its pulleys and bands, the lid cannot bind, but can always be moved with perfect freedom. 70

Having described my invention, what I claim is—

1. In a piano or organ, the shaft B, arranged in bearings in the case, as shown, and having pulleys, the bands connected with said pulleys 75 and with the lid and arranged with each as set forth, and the hangers E, sustaining the shaft in its relation to the lid and serving to limit the said lid in either its inward or outward movement, all substantially as shown and set 80 forth.

2. In a piano or organ, the combination of the lid with the shaft and its pulleys and bands arranged with each other, as shown, and the hangers serving both to connect the shaft with 85 the lid and as stops to limit the said lid in its inward and outward movements, substantially as shown and set forth, all being arranged in the case as represented.

In testimony whereof I affix my signature in 90 presence of two witnesses.

ALPHONSO F. DELANO.

Witnesses:

S. N. PIPER,

C. F. DANIELS.